Module 3: Environmental Aspects

GUIDANCE

To plan for and control your environmental impacts, you must know what these impacts are. But knowing what the impacts are is only part of the challenge—you also should know where these impacts come from. Stated another way, how does your facility (i.e., its activities, products, and services) interact with the environment? In Module 4, you will **identify the legal requirements and voluntary commitments** that apply to your facility. In this module you consider legal requirements and other information as you **identify environmental aspects** and **determine which ones are significant**. The systematic identification and efficient management of environmental aspects and impacts should result in positive impacts on the bottom line and significant environmental improvements.

Environmental Aspects and Impacts

Environmental aspect:
An element of a facility's activities, products, or services that can or does interact with the environment. These interactions and their effects may be continuous in nature, periodic, or associated only with events, such as emergencies.

Environmental impact:
Any change to the environment, whether adverse or beneficial, resulting from a facility's activities, products, or services.

In short, the aspect is the cause and the impact is the effect.

Figure 3-1: Examples of the Link between Aspects and Impacts

Environmental Aspect	⇨	**Environmental Impact(s)**
Emissions of volatile organic compounds (VOCs)	⇨	Air pollution, smog
Discharges to stream	⇨	Degradation of aquatic habitat and drinking water supply
Spills and leaks	⇨	Soil and groundwater contamination
Electricity use	⇨	Air pollution, global warming
Use of recycled paper	⇨	Conservation of natural resources

Various approaches exist for identifying environmental aspects and determining significance. **Tool 3-1** provides examples of techniques that can help you identify and prioritize your aspects. The tools presented in this Template provide examples of approaches your facility might wish to customize for its use. They are not meant to be rigid prescriptions.

In general, identifying and evaluating your environmental impacts will involve the following tasks:

- Define the scope within which the environmental aspects and impacts will be identified, (that is, the scope of your EMS as you addressed in *Module 1*);
- Identify all activities, products, and services within that scope (*Module 1*);
- Identify the environmental aspects associated with the activities, products, and services; and
- Determine the subset of your environmental aspects that have significant impacts.

Select an approach that makes sense for your facility and then describe the approach in the form of a written **procedure**. You can modify **Tool 3-2, Sample Procedure for Identification of Environmental Aspects and Determination of Significant Environmental Aspects,** to develop that procedure. Keep the resulting information **up-to-date**, so that the potential aspects of new activities, products and services are factored into your targets and objectives (see *Module 5*) and operational controls (see *Module 12*).

A Recommended Approach: Creating Process Flow Diagrams

There are several ways to approach identification of aspects and impacts, but regardless of the approach you use, you will need a thorough understanding of all of your processes.

Process flow diagrams are a tool that allow a facility to visualize and understand how work gets accomplished. That understanding can help identify how processes can be improved. Facilities can use process flow diagrams to identify process inefficiencies and focus improvement efforts where they will have the most effect. Process flow diagrams also can help you identify environmental aspects and impacts.

As an EMS tool, process flow diagrams can help a facility to:

- **Improve its understanding of existing processes**, including the key **inputs** (such as chemicals, raw materials and other resources used), **outputs** (including products, wastes, air emissions, etc.) and **interactions** with other processes.
- **Identify areas for process improvement** that can result in environmental performance improvements (such as pollution prevention opportunities)
- **Identify environmental aspects and impacts.**

Getting Started on Process Flow Diagrams

- **Select a process** (or set of related processes) to examine. Processes might be prioritized for review based on a number of criteria, such as their relevance or importance to the facility, prior assessments of the process, existing knowledge of the environmental significance of the process, or a history of problems with the process, among others. Also, define the process boundaries. **Example 3-1: A List of Common Activities and Processes at a Hypothetical Federal Facility** can help you in considering your processes.
- Use a team, such as a subset of your cross-functional team (CFT), to understand and diagram how these process(es) work. At a minimum, the team should include the process "owner" as well as individuals that are actively involved in carrying out the process. Many facilities use a facilitator that is independent of the process under review to manage team meetings. Don't be surprised if team members have different opinions regarding how well the existing process works.
- As a team, **determine the level of detail** needed to accurately diagram your processes. Initially, you might diagram at a fairly high level, then get into more detail as improvement opportunities as identified.
- Decide on a **set of symbols** that the team will use to visually describe the process. For example you might use one symbol for inputs, one for processes, one for outputs, another for decision points, and another for methods used. The process flow diagram in this module (Example 3-2) uses a set of symbols like this.
- **Identify the key steps** (or "unit operations") in the process first. Then **analyze** each of these steps in more detail. Use lines or arrows to show the relationships among individual process steps. Use brainstorming and/or storyboarding techniques to identify the process steps and agree upon the sequence of these steps.
- First **prepare an "as is" diagram** that describes how the process works now, including key process inputs to and outputs. For environmental purposes, key inputs include energy and other resources consumed, and raw materials and chemicals used. Outputs include products or services, air emissions, noise, odor, radiation, wastewater discharges, solid and hazardous wastes. This "as is" diagram can be used to identify environmental aspects as well as opportunities for improvement.

A process flow diagram of a common industrial operation is provided below as **Example 3-2.** For this EMS Template, the process flow diagram also shows the environmental aspects of the process. This process flow diagram shows "inputs, processes, outputs, products" labels that correspond to a column heading of this name on the associated environmental aspect identification form **(Form 3-2, Identification and Significance Determination of Environmental Aspects, and Setting Objectives and Targets).** Form 3-2 is provided to illustrate how the process flow diagram can be used to identify and determine SEAs. You should review the example and use it to provide a starting point for understanding how the aspect identification process works and for applying it at your facility.

Additional Points to Consider in Identifying Aspects

In addition to process flow diagrams, your aspect identification process may benefit from consulting other sources of information such as environmental permits, EPCRA reports, Material Safety Data Sheets, and monitoring records. **Tool 3-1: Some Techniques and Data Sources for Identifying and Evaluating Environmental Impacts** provides a list of such techniques and data sources.

Remember to look at **services** as well as products. While the need to examine on-site operations might be obvious, you also should consider the potential impacts of what you might do **"off-site"** (such as servicing equipment at customer sites). Similarly, the environmental aspects of the products, vendors, and contractors **you use** may be less obvious, but should still be considered. Aspects may also result from **past activities**, such as spills. You may want to refer to the defined scope of your EMS when undertaking this activity.

Where appropriate, individual aspects can be grouped. For example, if energy use is listed as an environmental aspect for several processes, it may also be a facility-wide concern. The CFT could list energy on each process-specific aspect form and then record the aspect, significance determination, and objectives for that aspect on a facility-wide form to indicate it as a facility-wide concern. A facility-wide objectives and targets by category example is included as Example 5-1.

Determining Significance

Determining which aspects have significant impacts and therefore will be included in your EMS as significant environmental aspects (SEAs) is one of the most crucial steps in EMS planning. It can be one of the most **challenging** – as well as one of the most **rewarding**. Decisions you make in this step will affect many other system elements (such as setting objectives and targets, establishing operational controls, and defining monitoring needs). Careful planning of this activity will pay dividends later.

Determining which aspects are significant involves some subjective decisions. For this reason, you will achieve more balanced results by having a CFT that represents different job functions. This will provide a cross-section of operational experience and different perspectives.

Your CFT should carefully define the **criteria** that will be used to determine which environmental aspects are significant. The criteria presented below and in **Tool 3-2: Sample Procedure for Identification of Environmental Aspects and Determination of SEAs** are intended to achieve a balance between structure and flexibility. They are a starting point that you can use to customize your own criteria.

- An obvious initial criterion is whether or not the aspect is subject to environmental regulations—all of these aspects, as defined by broad scientific and legislative consensus, are significant. A closely related condition is whether an aspect is the subject of company policy, goals, or voluntary commitments. For example, many companies have established

energy-use, water-use or waste reduction goals and targets – because it also makes good business sense. If these company policy/goals apply to your facility then the associated aspects should be considered significant.

- A second criterion to consider involves the views of interested parties. One of the commitments of your environmental policy must be communication with external stakeholders. There are a variety of community concerns that might affect your designation of a particular activity as a significant aspect. These may include issues other than pollution. Some examples are the noise level or odor produced by your facility; increased traffic caused by your business; and increased light needed for your operations. Aspects that the community considers important (for example, has lodged complaints about), should be labeled as significant in your EMS. As a starting point, see **Tool 3-3: Worksheet for Identifying Community Issues.**
- A third criterion is whether the aspect has good technical and financial potential for pollution prevention improvements (such as the reduced use of water, energy, or hazardous materials). Pollution prevention is also included in your environmental policy. The determination that makes for a particular aspect under this criterion is highly subject to the specific circumstances and values of your facility and community. For example, a high rate of water use would be of higher concern in a desert region than in a region where water is more plentiful. The determination that your CFT makes is based on your judgment and your facility's specific circumstances. As a starting point, see **Tool 3-4: Worksheet for Identifying Natural Resources Use/Pollution Prevention Potential.**
- A final criterion is one that your CFT customizes for your facility. A commonly used approach relies on scoring environmental aspects based on magnitude, frequency, toxicity, and duration. **Tool 3-2: Sample Procedure for Identification of Environmental Aspects and Determination of SEAs** presents one example of such factors.

SEAs serve as the basis for further planning of your EMS. In a subsequent step, each SEA is assigned an **objective**. That is, it either becomes the subjects of controls, improvements, or an investigation leading to improvements (*Module 5*). Controls will be ongoing. Improvements will have **targets** that specify how much can be achieved and by when. Investigations will have targets that indicate when study results will be issued. Each improvement (and investigation) objective will be associated with an **environmental management program** that specifies who is responsible for what outcomes and by when (*Module 6*). In addition, your facility's SEAs will have **key characteristics** that are **monitored and measured** (*Module 14*), and also will be the basis for determining where **operational controls** are required (*Module 12*).

Of course, all aspects that are significant as a result of being subject to environmental regulations must be managed and controlled. You must comply with the law. However, when you select improvement objectives you should consider both regulated and non-regulated significant aspects. For instance, a regulated aspect may also be the subject of pollution prevention efforts that save your company money. For example, eliminating certain constituents in, or reducing volumes of discharges or emissions, might place your facility in a less onerous regulatory reporting bracket and reduce your environmental management and reporting costs.

Remember: You don't have to do everything at once. There may be good reasons (such as cost, availability of technology, notices of violation, or scientific uncertainty) for making environmental improvements regarding some SEA while just trying to control others.

TOOLS

Tool 3-1: Some Techniques and Data Sources for Identifying and Evaluating Environmental Aspects and Impacts

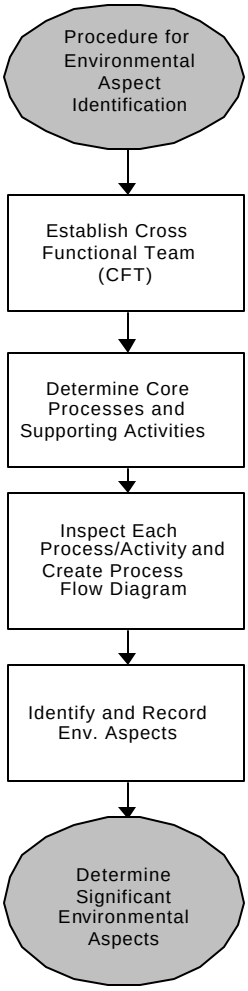
Process Hazard Analyses	Used to identify and assess potential impacts associated with unplanned releases of hazardous materials. Methodology in common use due to Occupational Safety and Health Act (OSHA) Process Safety Management regulations. Typically employs team approach to identify and rank hazards.
Failure Mode and Effects Analyses	Commonly used in the quality field to identify and prioritize potential equipment and process failures as well as to identify potential corrective actions. Often used as a precursor to formal root cause analyses.
Process Flow Diagrams	Process flow diagrams are a tool that allows an organization to visualize and understand how work gets accomplished and how its work processes can be improved. Process flow diagrams can help an organization understand its environmental aspects, reduce wastes and pollution, and reduce operating costs by identifying and eliminating unnecessary activities. See Example 3-2 of this module for an example of a process flow diagram for an industrial process (outdoor painting of large equipment).
Environmental Impact Assessments	Used to satisfy requirements of National Environmental Policy Act (NEPA) regarding the evaluation of environmental impacts associated with proposed projects. Methodology in common use, but not typically used to assess environmental impacts associated with existing operations.
Life Cycle Assessments	Used to assess the cradle-to-grave impacts of products or processes, from raw material procurement through disposal. Life-cycle methodologies are somewhat subjective and can be resource intensive. These methodologies are described in ISO 14040-14048.
Risk Assessments	Used to assess potential health and/or environment risks typically associated with chemical exposure. Variety of qualitative and quantitative methodologies in common use.
Project Safety / Hazard Reviews	Used to assess and mitigate potential safety hazards associated with new or modified projects. Methodologies in common use. Typically do not focus on environmental issues.
Emission Inventories	Used to quantify emissions of pollutants to the air. Some data on emissions or chemicals of concern may already by available to you, based on EPCRA requirements and Clean Air Act (CAA) Title V permitting program data requirements.
Pollution Prevention or Waste Minimization Audits	Used to identify opportunities to reduce or eliminate pollution at the source and to identify recycling options. Requires a fairly rigorous assessment of facility operations. These audits typically do not examine off-site impacts.
Environmental Property Assessments	Used to assess potential environmental liabilities associated with facility or business acquisitions or divestitures. The scope and level of detail is variable. These assessments typically do not assess impacts associated with products or services.
Environmental Cost Accounting	Used to assess the full environmental costs associated with activities, products or services. Emerging protocols require comprehensive assessments to quantify such costs.
Environmental Compliance Audits	Used to assess compliance with federal, state, and local environmental regulations. These methodologies are in common use. Their scope and level of detail vary. These are not typically directed at examining environmental impacts (particularly for products).

Tool 3-2: Sample Procedure for Identification of Environmental Aspects and Determination of Significant Environmental Aspects

Purpose

This procedure defines [Your Facility's Name]'s method for the identification of environmental aspects of its operations and the determination of significance for aspects that have actual or potential significant impacts on the environment.

Procedure for Environmental Aspect Identification



Responsibilities of the CFT

The facility Cross Functional Team (CFT) led by the Environmental Management Representative (EMR) or designee is responsible for completing the Form 3-2 (see below) for each core process and supporting activity. If possible, members of the CFT will conduct a physical inspection when completing the form. The completed form is a process flow diagram of a process or activity and is used to identify environmental aspects.

At a minimum, the CFT will review and revise the completed forms, by means of physical inspection, as necessary at issuance, annually, and before and immediately following implementation of new or modified processes/activities.

All environmental aspects are evaluated for significance as defined in the section below, Procedure for Determination of Significant Environmental Aspects.

Creating a Process Flow Diagram

The following procedure is used to fill out the Aspect Identification portion of **Form 3-2**, **Identification and Significance Determination of Environmental Aspects, and Setting Objectives and Targets.**

Creating the process flow diagram consists of identifying all raw materials, chemicals, and utilities used as inputs and all outputs produces as products and by-products. Outputs are all products, wastes produced, recycled materials, water discharges, and air emissions known for the process(es).

When identifying inputs and outputs, all modes of operation will be considered because startup, shutdown, or emergency operations might introduce additional aspects to the process. When doing the diagrams, the team will make notes of other potentially useful information such as the quantity or volume used per unit time, where available. These diagrams will be improved over time with specific data to allow material balances in the long term, if this is not possible initially.

To assist with these diagrams, the CFT shall consider the following potential inputs and outputs:

Inputs

- Supplies: Enter the major, non-chemical supplies used in the process.
- Chemical: Enter any chemical materials used in the process.
- Energy Use: Enter energy type and use. (Levels can be relative to the facility total use if individual rates through a process are not known).
- Water Use: Enter water type (e.g. city, well, storm, process, chilled) and use. (Levels can be relative to the facility total use if individual rates through a process are not known).
- Other Inputs: Enter inputs that are not covered clearly in the above categories.

Outputs

- Air Emissions: List all air emissions whether they are drawn directly through a stack or are discharged into the room and escape as fugitive emissions.
- Noise/Odor/Radiation: Include noise and odor as an air emission if potentially noticeable outside the facility and list any potential radiation emitted from the facility.
- Water Discharges: Enter all wastewater streams that discharge directly to storm or sanitary sewer systems or surface waters. Containerized wastewater should be included in the solid waste / residual wastes category.
- Solid / Residual Wastes: Wastes are any materials intended to be discarded or disposed of, whether regulated or not, and include liquids, solids, and gases. Also include recycled materials, returnable containers, and chemical by-products under this category.
- Storm Water Discharges: List all storm water discharges from all process areas.
- Spills: Enter all potential spills that might occur in all process areas.

Procedure for Determination of Significant Environmental Aspects (SEAs)

Where appropriate, individual aspects can be grouped. (For example, if the consumption of energy is listed as an environmental aspect in several areas, the CFT can group these listings such that consumption of energy appears just once on a facility-wide form.)

The following criteria will be used to determine significance and are listed Form 3-2:

1. Legal Requirements/Voluntary Commitments/Company Policy: Subject to specifically relevant legislation, regulation and/or permit requirements that address significant impacts to the environment. This will likely include aspects associated with processes and activities if (1) environmental regulations specify controls and conditions, (2) information must be provided to the authorities, and/or (3) there are, or may be, periodic inspections or enforcement actions taken by the authorities. Potential aspects that are subject to environmental regulations in the event of incidents will be recognized as significant when such as event occurs. A closely related condition is whether an aspect is the subject to or associated with environmentally-related company goals, directives, policies or subject to or associated with voluntary covenants to which the company had committed.
2. Community Concern: Subject to or associated with community concerns, such as those previously expressed in the form of complaints or critical inquiry. If helpful, use Tool 3-3: Worksheet for Identifying Community Issues.
3. Pollution Prevention Potential: Based on technical and business conditions, the aspect has a high potential for pollution prevention or resource-use reduction. If helpful, use Tool 3-4: Worksheet for Identifying Natural Resources Use/Pollution Prevention Potential
4. Potential Impact to the Environment: Associated with potential impact to the environment from high environmental loading due to one or more of the following:
    a. Toxicity (compositional characterization of materials and wastes)
    b. Amounts (volumes and masses of emissions, waste, or releases)
    c. Amounts (consumption of renewable and non-renewable resources)
    d. Frequency of episodes
    e. Severity of actual or potential impacts

Using the Significance Determination portion of **Form 3-2**, the CFT or a subset thereof, shall evaluate, each identified aspect to determine whether it is significant. The environmental aspects will be considered to be "significant" if the aspect has an impact on the environment and meets one or more of the four criteria. For criteria 1 and 2, put Yes or No in the appropriate column on Form 3-2. Put Low or Yes for criteria 3. Indicate Low, High, or "NA" for not applicable for criterion 4. Finally, evaluate the four criteria. If any of them are Yes (or High for criteria 4), indicate "S" for significant in the appropriate column. Otherwise, indicate "N" for not significant. Provide the rationale for S or N in the appropriate column on Form 3-2.

Frequency

This procedure will be repeated at least annually. More frequent updates will be conducted for new projects or processes that affect the list of the facility's significant aspects.

Records

The originals of completed **Form 3-2** are maintained by the EMR or designee.

Form 3-2: Identification and Significance Determination of Environmental Aspects and Setting Objectives and Targets

Person Completing Form: Area/Process: Date:

ASPECT IDENTIFICATION			SIGNIFICANCE DETERMINATION						OBJECTIVES &TARGETS*	
Category/Aspect	Inputs, Processes, Outputs, Products	Quantity or Volume	Legal Requirements/ Voluntary Commitments, Company Policy	Community Concern	Pollution Prevention Potential	Potential Impact to the Environment	N or S	Rationale for Significance (S) or Non-significance (N)	Objective & Type C = control or maintain S = study or investigate I = improve	Target
Energy Usage:										
Water Usage:										
Supplies/Disposables:										
Chemicals:										
Air Emissions:										
Noise/Odor/Radiation:										
Wastes:										
Water Discharges:										
Stormwater Discharges:										
Spillage and Other:										

* The Objectives & Targets column is discussed in Module 5, Objectives and Targets. A completed form is provided with Example 3-2.

Tool 3-3: Worksheet for Identifying Community Issues

Process	Aspect	Community Issue(s)	Rank
Contact Person: _____ Date: _____			

Rank indicates Yes or No, and can be transferred to Form 3-2.

Tool 3-4: Worksheet for Identifying Natural Resources Use/Pollution Prevention Potential

Process	Aspect	Natural Resources Used/ Pollution Prevention Potential	Rank
Contact Person: _____ Date: _____			

Rank indicates Low or High and can be transferred to Form 3-2.

EXAMPLES

This module presents an example of how to develop process flow diagrams and how to use that information on the Aspects Identification and Significance Determination Form (Form 3-2). A hypothetical federal facility is used as an example. The drydock painting example will be further expanded in Modules 5 and 6 to illustrate how to proceed from SEA determination to setting objectives and targets and establishing Environmental Management Programs (EMPs).

- **Example 3-1** provides a list of common activities and processes at a hypothetical federal facility.
- **Example 3-2** provides an example process flow diagram and aspect identification and significance determination form for outdoor painting of large equipment*.

*Example 3-2 was prepared for EPA by DM Austin Environmental Consulting, Inc. (Austin Environmental) and is included as provided with some modification. This example is taken from Module 3 of the Shipbuilding and Ship Repair Industry- EMS Implementation Guide (Rev 3.0, November 2001), also prepared by EPA. That document also includes other industrial operations related to the shipbuilding and repair sector.

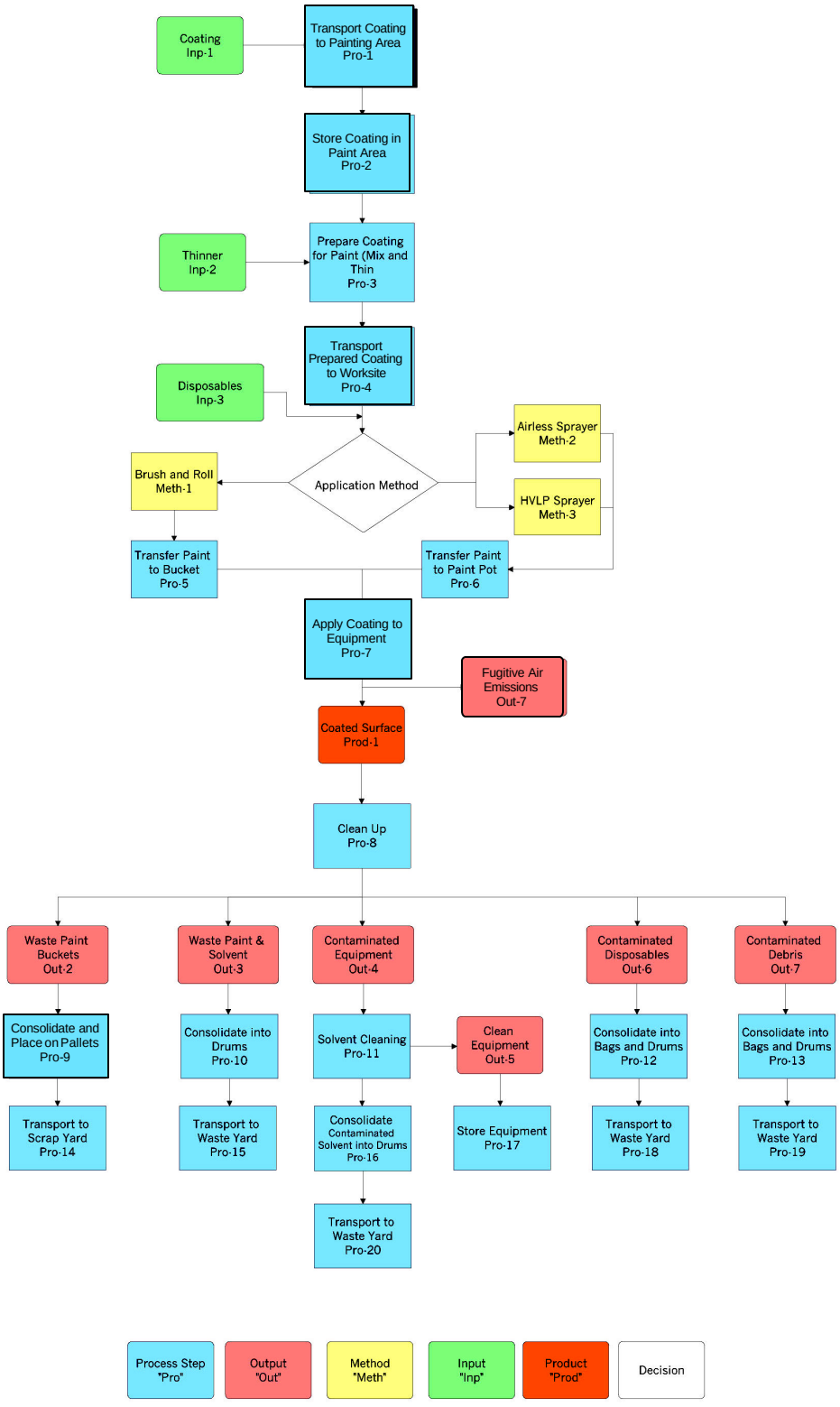
The example likely will require you to further refine and modify them to fit your facility's needs.

Example 3-1: A List of Common Activities and Processes with Functional Areas at a Hypothetical Federal Facility (Navy Facility)

Activity and Process	Functional Area
Administration	General Support
General Repairs	Facility Maintenance and Operation
Building and Grounds Painting	
Landscaping, Mulching, Composting	
Fuel Storage and Transfer	
Cafeteria Operations	
Laundry Operation	
Electrical Generation	
Compressed Air Generation	
Steam Generation	
Outdoor Painting (of Large Equipment)*	Production and Maintenance of Military Equipment
Outdoor Painting (of Small Parts)	
Depainting and Surface Preparation, Solvent-Based	
Depainting and Surface Preparation, Dry Abrasive Blasting	
Gas Metal Arc Welding	
Burning and Cutting	
High Pressure Water Jetting	
Metal Grinding	
Material Transport (crane, etc.)	
Metal Working	
Other Painting, Coating, and Plating	
Pipe Fabrication, Aluminum Fabrication, Steel Fabrication	
Metal Plating and Surface Finishing	
Storage of Raw Materials and Waste: paint and solvents, metals, hydraulic fluids, lube oils, paint waste, blasting media, welding gases, universal waste, diesel, fuel, gasoline	Raw Materials Management and Waste Accumulation
Hazardous Waste Disposal	Waste Disposal and Treatment
Universal Waste Disposal	
Wastewater Disposal	
Wastewater Treatment	

* Indicates that an example process flow diagram and aspect identification and significance determination form are provided for this operation (see Example 3-2). This example is modified from Module 3 of the Shipbuilding and Ship Repair Industry- EMS Implementation Guide (Rev 3.0, November 2001), also prepared by EPA. That document also includes other industrial operations related to the shipbuilding and repair sector. That document is available at http://www.sectorstar.com/sector/ShipbuildingShipRepair/.

Example 3-2: Flow Diagram and Aspect Identification and Significance Determination Form for Outdoor Painting of Large Equipment



Person Completing Form: John Smith, Paint Department Supervisor Area/Process: Outdoor Painting of Large Equipment Date: 5/17/01

ASPECT IDENTIFICATION			SIGNIFICANCE DETERMINATION						OBJECTIVES &TARGETS	
Category/Aspect	**Inputs, Processes, Outputs, Products**	**Quantity or Volume**	**Legal Requirements/ Voluntary Commitments, Company Policy**	**Community Concern**	**Pollution Prevention Potential**	**Potential Impact to the Environment**	**N or S**	**Rationale for Significance (S) or Non-significance (N)**	**Objective & Type** C = control or maintain S = study or investigate I = improve	**Target**
Energy Usage:										
Electricity/ Paint Mixers	Mix and thin coatings (Pro-3)	10 kw/ year	No	No	Low	Low	N	Does not meet significance criteria, low volume usage		
Diesel Fuel/Forklift	Transport coatings and waste (Pro-1, Pro-14, Pro-15, Pro-16, Pro-18, Pro-19, Pro-20)	1000 gallons per year	No	No	Low	Low	N	Does not meet significance criteria, low volume usage		
Water Usage:										
N/A		N/A								
Supplies/Disposables:										
Rags	Inp-3		No	No	Low	Low	N	Does not meet significance criteria		
Gloves	Inp-3		No	No	Low	Low	N	Does not meet significance criteria		
Tyvek coverall	Inp-3		No	No	Low	Low	N	Does not meet significance criteria		
Filters	Inp-3		No	No	Low	Low	N	Does not meet significance criteria		
Sand Paper	Inp-3		No	No	Low	Low	N	Does not meet significance criteria		
Chemicals:										
VOC Content HAP Content	Virgin Coatings (Inp-1)		Yes	Yes	Low	N/A	S	Air Permit		
VOC Content HAP Content	Virgin Thinners (Inp-2)		Yes	Yes	Low	N/A	S	Air Permit		
Air Emissions:										
Fugitive VOCs	Applying Coating (Pro-7)	40 tons	Yes	Yes	Yes	N/A	S	Permits to operate, toxic air emissions rule		
Fugitive HAPs	Applying Coating (Pro-7)	10 tons	Yes	Yes	Yes	N/A	S	Permits to operate, toxic air emissions rule		

ASPECT IDENTIFICATION			SIGNIFICANCE DETERMINATION						OBJECTIVES &TARGETS	
Category/Aspect	**Inputs, Processes, Outputs, Products**	**Quantity or Volume**	**Legal Requirements/ Voluntary Commitments, Company Policy**	**Community Concern**	**Pollution Prevention Potential**	**Potential Impact to the Environment**	**N or S**	**Rationale for Significance (S) or Non-significance (N)**	**Objective & Type** C = control or maintain S = study or investigate I = improve	**Target**
Over spray, fugitive particulate emissions	Applying Coating (Pro-7)	8 tons	Yes	Yes	Yes	N/A	S	Permits to operate, toxic air emissions rule		
Noise/Odor/Radiation:										
Odor from VOCs fume	Applying Coating (Pro-7)		No	No	Low	Low	N	Does not meet significance criteria		
Wastes:										
Contaminated Scrap	Waste Paint Cans (Out-1)	10,000 lbs per year	No	No	Yes	Low	S	Waste Reduction Program		
Contaminated Waste	Tyvek Suits, Rollers, Brushes, Filter Masks, Paint Stirrers, Drop Clothes, Masking Tape (Out-5), Debris (Out-6)		No	No	Yes	Low	S	Waste Reduction Program		
Waste Chemicals	Waste Paint and Solvent (Out-2)	1,500 gallons	Yes	Yes	Yes	N/A	S	RCRA (Title C)		
Solid waste, landfill	Consolidate contaminated disposables (Pro-12) and debris (Pro-13)	10,000 and 5,000 lbs per year	No	No	Yes	Low	S	Waste Reduction Program		
Water Discharges:										
N/A										
Stormwater Discharge:										
VOC-contaminated water			Yes	Yes	Yes	N/A	S	Storm water permit		
Heavy metal contaminated water			Yes	Yes	Yes	N/A	S	Storm water permit		

ASPECT IDENTIFICATION			SIGNIFICANCE DETERMINATION						OBJECTIVES &TARGETS	
Category/Aspect	**Inputs, Processes, Outputs, Products**	**Quantity or Volume**	**Legal Requirements/ Voluntary Commitments, Company Policy**	**Community Concern**	**Pollution Prevention Potential**	**Potential Impact to the Environment**	**N or S**	**Rationale for Significance (S) or Non-significance (N)**	**Objective & Type** C = control or maintain S = study or investigate I = improve	**Target**
Spillage and Other:										
Spillage	Transport waste cans, cleaning solvents, contaminated solvents and debris to scrap yard (Pro-14, Pro-18, Pro-19, Pro-20)	5 gallons per year	No	No	Low	Low	N	Does not meet significance criteria, low volume spillage		
	Consolidate equipment cleaning solvent into drums (Pro-16)	10 gallons per year	Yes	No	Low	N/A	S	Volume exceeds "No Spill" Policy limits		
	Transport coatings and thinners (Pro-1 through Pro-6)		No	No	Low	Low	N	Does not meet significance criteria, low spillage volume		
Spillage, contaminated scrap	Consolidate Waste (Pro-9)	5 gallons	No	No	Low	Low	N	Does not meet significance criteria , low volume of spillage, scrap is recycled		
Coating Thinner Spillage	Consolidate waste paint and solvent (Pro-10)	100 gallons per year	Yes	No	Low	N/A	S	Volume exceeds "No Spill" Policy limits		
	Solvent Cleaning of Equipment (Pro-11)	50 gallons per year	Yes	No	Low	N/A	S	Volume exceeds "No Spill" Policy limits		
	Consolidate Contaminated Solvent into Drums (Pro-16)	10 gallons per year	Yes	No	Yes	N/A	N	Does not meet significance criteria, low volume of spillage		